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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,743	08/15/2006	Stefan L Burtscher	16785.3	1021

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EXAMINER	
KENNEDY, JOSHUA T	
ART UNIT	PAPER NUMBER
3679	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/596,743	BURTSCHER, STEFAN L	
	Examiner	Art Unit	
	JOSHUA T. KENNEDY	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Examiner notes that a translation of the Kollegger reference (WO 01/65023) has been provided along with the following Office action.

Claims 1-14 have been examined.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa et al (US Patent 5,802,788) in view of Kollegger (WO 01/65023).

Regarding claim 1, Ozawa et al disclose an anchorage for at least one pre-tensioned or stressed tensile element having:

one or more wedges (2,5);

an anchor body (3), having a modulus of elasticity that is lower compared to the modulus of elasticity of other parts of the anchorage (5), characterized in that:

at least one of the wedge and the anchor body is formed by at least by two adjacent layers (2,5) with at least one of the layers being formed from a material having a lower modulus of elasticity (5; Column 8) than the material from which

the another further layer or layers of the wedge (2) and/or of the anchor body are formed.

However, though Ozawa et al discloses that the configuration of the member (5) is not limited to a tubular configuration and can be of any suitable configuration (Col 7, Lines 37-39), Ozawa et al do not disclose the greatest thickness of said at least one of the wedge- shaped layers measured normal to the longitudinal axis of the tensile element is provided in the region near the load.

Kollegger teaches a similar anchorage for a pre-tensioned or loaded strength member having a wedge layer (3) being of a different material than the wedge against which it acts and its greatest thickness of said at least one of the wedge- shaped layers measured normal to the longitudinal axis of the tensile element is provided in the region near the load (Fig 1), wherein the wedge layer is adhesively bonded to the rod and located adjacent the wedges and further shaped so that “the bond stresses between [the rod] and [the sleeve] are more evenly distributed than in a cylindrical or conical cast anchoring of the conventional type" (Page 13, Par. 1 of the translation). “This allows a more uniform transfer of force along the [rod] to the anchor [assembly] and that makes it possible to stand up to higher dynamic loads” (Page 6, Par. 1 of the translation). It would have been obvious to a person of ordinary skill in the art to modify Ozawa et al as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the instant invention as claimed has the properties predicted by the prior art, it would have been obvious to make the body (5) of Ozawa et al in the shape of a wedge having the greatest thickness in the region near the load as

taught by Kollegger in order to gain the commonly understood benefits and applications of such an adaptation and/or modification, such as altering the shape of the more elastic wedge member such that so that the bond stresses between the rod and the sleeve are more evenly distributed than in a cylindrical or conical cast anchoring of the conventional type allowing for a more uniform transfer of force along the rod to the anchor assembly and that makes it possible to stand up to higher dynamic loads. A method of enhancing a particular class of devices (in this case, anchorages) in this way has been made part of the ordinary capabilities of one skilled in the art based upon the teaching of such improvement in other situations.

Tomchack does not disclose any structural or functional significance as to whether the biasing means bias the outer component towards the inner component, or vice versa. The reversal of components in a prior art reference, where there is no disclosed significance to such reversal, is a design consideration within the skill of the art. In re Gazda, 219 F.2d 449, 104 USPQ 400 (CCPA 1955); In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). Accordingly it would have been obvious to one of ordinary skill in the art to modify the assembly of Tomchak to have the surfaces of the inner component be fixed while the surfaces of the outer component were biased as the reference does not disclose any structural or functional significance as to whether biasing means bias the outer component towards the inner component or vice versa as this is merely a rearrangement of parts producing expected and predictable results.

Regarding claim 2, Ozawa et al disclose slots (Fig 8) being arranged in the layer formed

from the material having a lower modulus of elasticity to reduce the stiffness thereof in a direction normal to the longitudinal axis of the tensile element.

Regarding claim 3, it is the patentability of the product, and not recited process steps, that is to be determined in product-by-process claims irrespective of whether or not only process has been recited. Accordingly, it is of little consequence how the layers of different moduli of elasticity were formed when layers of different moduli of elasticity are present. See MPEP § 2113.

Regarding claim 4, Ozawa et al disclose the anchor body (3) as a coupling for two tensile elements being provided with seats for wedges, the seats being are oriented opposite to each other (Fig 5).

Regarding claims 5 and 10, Ozawa et al disclose the layer formed from the material having a lower modulus of elasticity is connected to an adjacent layer having a higher modulus of elasticity via a non-positive or a positive connection (Fig 5) comprising a profile with a counterprofile (Col 5, lines 56-57; Col 6, lines 47-54)

Regarding claims 6 and 11, Ozawa et al disclose a transmission of shearing force between the wedge and the tensile element is ensured by a non-positive connection or by form closure (Col 5, lines 56-57; Col 6, lines 47-54) comprising friction/ the shaping of a profile.

Regarding claims 7, 12 and 13, Ozawa et al disclose the anchorage significantly as claimed, but do not disclose the ratio of the lower modulus of elasticity to the a higher modulus of elasticity is at least 1:2,at least 1:10, or in a range from 1:20 to 1:30. It is not inventive to state the optimum values of a thickness of the bearing portion. Although silent on the ratio of moduli of elasticity, the device of Ozawa et al inherently has a modulus of elasticity relative to the strength of connection desired. Through routine experimentation and optimization, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wedge layers of Ozawa et al in view to have the ratio of the lower modulus of elasticity to the a higher modulus of elasticity is at least 1:2,at least 1:10, or in a range from 1:20 to 1:30 because this is merely the application of the of the expected level of skill on the part of one of ordinary skill. No new and unexpected results are produced.

Regarding claims 9 and 14, Ozawa et al disclose at least one of the wedge and the anchor body is, formed from a material having the higher modulus of elasticity and is provided with filling materials, such as aluminum oxide, that result in the higher increasing the modulus of elasticity (Col 9, Lines 7-12).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa et al in view of Kollegger as applied to claims 1-7 and 9-12 above, and further in view of Thal (US Patent 4,744,691).

Ozawa et al in view of Kollegger disclose the anchorage significantly as claimed but do not disclose the wedge-shaped layer having a lower modulus of elasticity being formed by two partial wedge-shaped layers with different moduli of elasticity.

Thal teaches a similar anchorage system having a wedge comprised of a two piece member having different moduli of elasticity (Fig 7) to strengthen the connection of the wedge directly to the tensile member. It would have been obvious to a person of ordinary skill in the art to modify the anchorage of Ozawa et al in view of Kollegger as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the instant invention as claimed has the properties predicted by the prior art, it would have been obvious to make the wedge of a two piece member having different moduli of elasticity (Fig 7) to strengthen the connection of the wedge directly to the tensile member. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art. KSR, 550 U.S. at ___, 82 USPQ2d at 1395; Sakraida v. AG Pro, Inc., 425 U.S. 273, 282, 189 USPQ 449, 453 (1976); Anderson 's-Black Rock, Inc. v. Pavement Salvage Co., 396 U.S. 57, 62-63, 163 USPQ 673, 675 (1969); Great Atlantic & P. Tea Co. v. Supermarket Equipment Corp., 340 U.S. 147, 152, 87 USPQ 303, 306 (1950).

Response to Arguments

Applicant's arguments filed 9/25/2008 have been fully considered but they are not persuasive.

As to the claims, Applicant argues:

> "The subject matter of Kollegger is not an anchorage wherein lateral pressure is applied to the tensile element via a wedge effect" (Page 7, Lines 1-2)

Examiner respectfully disagrees. The base reference, Ozawa already teaches the anchorage system structure significantly as claimed where pressure is applied to the tensile element via wedge effect. Examiner is further relying on Kollegger to solely teach a provision, from a similar form of wedge anchor, of having the intermediate material being adhesively bonded to the rod and located adjacent the wedges and further shaped so that the bond stresses between the rod and the sleeve are more evenly distributed than in a cylindrical or conical cast anchoring of the conventional type. This allows a more uniform transfer of force along the rod to the anchor assembly and makes it possible to stand up to higher dynamic loads.

Applicant further argues:

> "Kollegger does not mention anywhere that one element of the anchorage has a lower modulus of elasticity than another element of the anchorage" (Page 7, Lines 3-4).

Examiner respectfully disagrees. It is well established that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. Therefore, the selection of any of the conventionally known and

available materials having different moduli of elasticity would have been an obvious matter of engineering design choice to one of ordinary skill in the art in consideration of properties of a wedge anchor system desired by the end user such as elasticity, added durability, etc. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Applicant finally argues:

> "Using the soft layer according to Ozawa, it is impossible to influence the diffusion of stress such that the contact pressure will increase from the region close to the load toward the region remoter from the load. This was not even considered or addressed by Ozawa. The soft layer according to Ozawa is able to reduce only local stress peaks" (Page 8, Lines 13-16)

Examiner respectfully disagrees. Since the base reference, Ozawa already teaches the anchorage system structure significantly as claimed where pressure is applied to the tensile element via wedge effect and that the soft layer provides for a reduction of only local stress peaks. To improve upon this existing structure, Examiner is further relying on Kollegger to teach the intermediate layer of this particular wedge shape allows a more uniform transfer of force along the rod to the anchor assembly and that makes it possible to stand up to higher dynamic loads.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA T. KENNEDY whose telephone number is (571)272-8297. The examiner can normally be reached on M-F: 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joshua T. Kennedy/
Examiner, Art Unit 3679
11/17/2008

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